

CENTRAL INTELLIGENCE AGENCY

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USSR PRODUCTION OF BROMINE

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According to information published in the USSR, there is no shortage of bromine in the USSR. [redacted] "Some Developments in the Field of Soviet Chemistry and Chemical Technology," states that the Solikamsk potassium deposits are the largest in the world and are being utilized on an extensive scale, with application of efficient chemical methods. During the period of the Stalin Five-Year Plans, a bromine industry was created in the USSR which fully satisfies the country's demand for this product. (1) (For a contrary viewpoint, see also "Potassium Deposits of the World" by Carl Liesegang, in Chemische Industrie, Vol II, No 8, 1950, p 407.)

The upper layer of the Solikamsk deposits, which is 80 m thick, consists of carnallite. This carnallite contains bromine. (2) There is, then, no shortage of raw material (in the form of carnallite and also sylvinit) for the production of bromine in connection with the production of potassium fertilizers and magnesium from the material in question.

Methods of efficient chlorination of bromides (potassium bromide, sodium bromide, and magnesium bromide) and of the isolation of bromine from them have occupied the attention of USSR investigators(3). In addition to the Solikamsk deposits, there are other sources of raw material in the form of potassium deposits(4). Technological methods for the utilization of sea water, which forms an inexhaustible source of raw material for the production of potassium salts, magnesium, and bromine, have been studied in the USSR (5,6). The waters of salt lakes and of Karabugazgöl (a bay of the Caspian Sea) are being utilized on a very extensive scale as crude material for a branch of the chemical industry which applies methods which have been developed in the USSR on the basis of work done by Academician N.S. Kurnakov and members of his school.(7)

The production of bromine from salt water found in oil wells has also been considered in the USSR.(8)

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CLASSIFICATION

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1. Bol'shaya Sovetskaya Entsiklopediya (Great Soviet Encyclopedia), Vol VI, 2d edition, 1951, p 134
2. Ibid., Vol LII, 1947
3. M. Ye. Pozin, Tekhnologiya Mineral'nykh Soley (Technology of Inorganic Salts), Goskhimisdats, Moscow/Leningrad, 1949, pp 193-211, FDD No 513963
4. Chemische Industrie, Vol II, No 8, 1950
5. V. P. Il'inskiy, "Sea Water As an Industrial Source of Bromine," Trudy Leningradskogo Politekh. Inst. imeni M. I. Kalinina, No 1, 1942, pp 110-123
6. Pozin, op. cit., pp 193-211
7. A. A. Armand, Nauchno-Issledovatel'skiye Instituty Tyazhelyoy Promyshlennost: (Scientific Research Institutes of the Heavy Industry), United Scientific Technical Press, Moscow/Leningrad, 1935, pp 113, 149, 214, 215, FDD No 515040
8. Pozin, op. cit., p 196

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